REMARKS

Claims 1, 2, 4, 6-21, 24-38, 41-49, and 52-59 are currently pending in the subject application and are presently under consideration. Claims 1, 21, 38 and 49 have been amended, as shown on pp. 2-14, to more clearly distinguish the claimed subject matter from the cited art.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1-2, 4, 6-14, 21, 24-31, 38, 41-44, 48-49, and 52-56 Under 35 U.S.C. §103(a)

Claims 1-2, 4, 6-14, 21, 24-31, 38, 41-44, 48-49, and 52-56 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patterson et al. (US 2003/0050008) in view of Lapaille et al. (US 6,539,214). Applicants' representative respectfully traverses the rejection of claims 1-2, 10-14, 21, 26-31, 38, 43-44, 48-49, and 55-56 under 35 USC § 103(a) as being unpatentable over Patterson in view of Lapaille.

As previously stated, the invention of Patterson is generally directed to satellite communications systems that can provide incremental global broadband services using Earth-fixed cells. Patterson is generally concerned with implementing scalable satellite systems comprising an increasing number of NGSO satellites. To this end, satellite communications between terminals and gateways through a satellite uplink are discussed generally. As part of this generalized discussion, Patterson cursorily raises aspects of a reverse link by stating, "The reverse link is the communication path from the user terminals in a service cell via the serving satellite to an associated gateway...In contrast to the forward link which has a single data source, the reverse link must support multiple user terminals transmitting simultaneously…The **gateway** uses a medium access control (MAC) layer protocol **to allocate these channel resources** (bandwidth and time slots) among user terminals on demand...The **gateway allocates resources among user terminals** based on the capacity requested by each user terminal, the available link capacity, and the waveforms that can be supported by the user terminal under the current link conditions...It may also be important for certain applications to maintain link availability as high as possible. This can be accomplished by changing to more robust waveforms at low bit rates when link conditions degrade." (*See* Patterson at [100]-[101]) *It is important to note that Patterson states that the GATEWAY allocates the resources and does not state that the terminal*

allocates the resources based on a determination related to the metric information sent from the gateway.

Thus, as also previously stated, in contrast to Patterson, the subject application addresses the return link specifically and at a level of detail not seen in Patterson. Generally, the subject application discloses compensating for noise in the reverse link without changing the interference relationship among a plurality of terminals employing the return link. To this end, the data rate can be adjusted and the transmission power levels can remain unchanged. The signal to noise ratio can be employed as a measure of the quality of the return link signal and used as a metric for determining how to adjust the data rate to compensate for changes in the link conditions. This metric can be communicated to the terminals by the gateway. The terminals can then determine how to allocate resources based at least in part on the information of the metric.

Therefore, as claimed in independent claims 1, 21, 38, and 49, a change in the return link signal quality can be corrected for by, "…adjusting a data rate, at the terminal, based at least in part on a **determination made at the terminal** to adjust the data rate to correct for degradation of the return link signal, for a message sent from the terminal through the return link based on the change in the return link signal quality without changing link power levels and the interference relationship among the plurality of terminal" (or similar language, emphasis added), *e.g., the terminal can evaluate a metric and determine how to adjust for changes in a system.* Thus, contrary to the claimed subject matter, Patterson illustrates a *gateway makes a determination* and the determination is communicated to a terminal where an adjustment is made. Clearly this is drastically different that the claimed subject matter. This difference is expounded upon in the instant disclosure. For example, inferences can be made relating to the reverse link (*e.g.*, without actual measurement of a change in the reverse link quality, *see* [0048]) and the TERMINAL can adjust the signal quality based on this inference without ever involving the gateway in a determination, an act that would NOT be possible under Patterson.

Further, the applicants' representative has asserted that Lapaille teaches away from the use of the use of the identified change and therefore, where the reference must be considered in the entirety (the Examiner is not allowed to cherry pick selected portions of a reference). Lapaille cannot be properly combined with Patterson to show a use of a change in the signal to noise ratio where Lapaille also specifically teaches that the change in the signal to noise ratio is

related to changing the interference relationship among terminals by changing power levels which is in direct contrast to the claimed subject matter.

> **A prior art reference must be considered in its entirety, *i.e.*, as a whole, including portions that would lead away from the claimed invention**. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984), emphasis added.

> "Under 35 U.S.C. 103 where the examiner has relied on the teachings of several references, the test is whether or not the references viewed individually and collectively would have suggested the claimed invention to the person possessing ordinary skill in the art. **It is to be noted, however, that citing references which merely indicated that isolated elements and/or features recited in the claims are known is not a sufficient basis for concluding that the combination of claimed elements would have been obvious.** That is to say, there should be something in the prior art or a convincing line of reasoning in the answer suggesting the desirability of combining the references in such a manner as to arrive at the claimed invention... [I]t would not have been obvious to modify [the prior art] ... without using [the patent application's] claims as a guide. It is to be noted that simplicity and hindsight are not proper criteria for resolving the issue of obviousness." *Ex parte Hiyamizu*, 10 USPQ2d 1393 (BPAI 1988), emphasis added.

Thus, merely arguing that Lapaille teaches that the change in the SNR indicates a change in the link quality is insufficient as it essentially ignores the remainder of the teachings of Lapaille. **Lapaille continues to also teach that the link quality change indicated by the change in the SNR is to be corrected by changing the interference levels (*e.g.*, by changing the power levels)** and thus cannot be read as obviating what is claimed in the subject application simply by selecting only a portion of Lapaille to combine with Patterson. ***In contrast to the claimed subject matter, Lapaille teaches changing power levels. The claims explicitly state that power levels are not changed.*** Where Lapaille teaches away from what is disclosed in the subject application, it is improper to combine selected portions of Lapaille with Patterson to attempt to show obviousness under 35 U.S.C. § 103.

Additionally, claims 2, 4, and 6-14 depend from claim 1, claims 24-31 depend from claim 21, claims 41-44 and 48 depend from claim 38, and claims 52-56 depend from claim 49, which are believed to be patentably distinct from Patterson as asserted *supra*. The rejection of

dependant claims 2, 10-14, 26-31, 43-44, 48, and 55-56 under 35 U.S.C. §102(e) is therefore obviated where claims 1, 21, 38, and 49 are allowable. Applicants therefore respectfully request that the Examiner withdraw the rejection of claims 1-2, 10-14, 21, 26-31, 38, 43-44, 48-49, and 55-56 under 35 USC § 102(e) as being obvious over Patterson.

II. Rejection of Claims 17 and 34 Under 35 U.S.C. §103(a)

Claims 17 and 34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patterson et al. (US 2003/0050008) in view of Lapaille et al. (US 6,539,214), as applied to claims 1 and 21, and further in view of Hogberg et al. (US 6,198,730). Applicants respectfully disagree for at least the following reason. Independent claim 1, from which claim 17 depends and independent claim 21 from which claim 34 depends, are believed to be allowable over Patterson and/or Lapaille, as asserted *supra*. Hogberg does not correct these particular deficiencies. The rejection of dependant claims 17 and 34 under 35 U.S.C. §103(a) is thus obviated. Applicants respectfully request that the Examiner withdraw the rejection of claims 17 and 34 under 35 USC § 103(a) as being obvious over Patterson, in view of Lapaille, in further view of Hogberg.

III. Rejection of Claims 15-16, 18-20, 32-33, 35-37, 45-47, and 57-59 Under 35 U.S.C. §103(a)

Claims 15-16, 18-20, 32-33, 35-37, 45-47, and 57-59 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Patterson et al. (US 2003/0050008) in view of Lapaille et al. (US 6,539,214), as applied to claims 1, 21, 38, and 49, and further in view of Xie et al. (US 6,781,978). Applicants respectfully disagree for at least the following reason. Independent claim 1, from which claims 15-16 and 18-20 depend, independent claim 21, from which claims 32-33 and 35-37 depend, independent claim 38, from which claims 45-47 depend, and independent claim 49 from which claims 57-59 depend, are believed to be allowable over Patterson alone or in combination with Lapaille, as asserted *supra*. Xie does not correct these particular deficiencies. The rejection of dependant claims 15-16, 18-20, 32-33, 35-37, 45-47 and 57-59 under 35 U.S.C. §103(a) is thus obviated. Applicants respectfully request that the Examiner withdraw the rejection of claims 15-16, 18-20, 32-33, 35-37, 45-47 and 57-59 under 35 USC § 103(a) as being obvious over Patterson, in view of Lapaille, in further view of Xie.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [QUALP802USA].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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